

N.C.D.O.T. GEOTECHNICAL UNIT **BORING LOG**

Metadiorite with Wide Fracture Spacing
Coring Terminated at Elevation 594.4 feet in

*Note: Drill fluid = creek water + bentonite Mud density = 64.5 lbs./cu. ft. Slurry was used for soil and weathered

Creek water alone was used for rock

Crystalline Rock: Metadiorite

rock drilling.

coring.

SHEET 19 OF 34 GEOLOGIST P. Weaver/P. Alton **WBS ELEMENT NO33454.1.1** ID No. B-4096 | COUNTY Davidson SITE DESCRIPTION Bridge 140 Over Rich Fork Creek on US 29-70/I-85 Business GROUND WATER (ft) BORING NO. B1-B **BORING LOCATION 19+89** ALIGNMENT -L-OFFSET 20ft RT 0 HR. NM COLLAR ELEV. 655.2 ft NORTHING 771938.59 **EASTING** 1651387.88 24 HR. 2.0 DRILL MACHINE CME 850 TOTAL DEPTH 60.8 ft DRILL METHOD Wash Rotary/HQ Core HAMMER TYPE 140 lb. Automatic DATE STARTED 2/20/04 COMPLETED 2/23/04 SURFACE WATER DEPTH NA **BLOW COUNT** ELEV. DEPTH **BLOWS PER FOOT** SAMP. SOIL AND ROCK DESCRIPTION (ft) (ft) 0.5ft | 0.5ft | 0.5ft 40 60 100 NO. /MOIL G 655.2 654.2 ALLUVIAL: Soft to Medium Stiff, Brown and Grey, Clayey, Coarse to Fine Sandy SILT <u>651.7</u> I ALLUVIAL: Medium Dense to Very Loose, 649.2 + 6.0 Grey, Clayey, Silty, Coarse to Fine SAND with a Trace of Organics (Leaf Fragments) SS-10 W 646.7 I WOH 2 W 641.7 I 13.5 S 636.7 I W RESIDUAL: Stiff to Very Stiff, Grey, Fine to Coarse Sandy SILT with Some Rock Fragments and a Little Mica 631.7 I 23.5 SS-11 25.9% 4 10 626.7 I 28.5 59/0.4 16 41 WEATHERED ROCK: Grey with Brown and 7 623.8 White, Metadiorite
CRYSTALLINE ROCK: Grev with White. 31.4 616.8 616.8 Moderately Weathered, Soft to Medium Hard, Metadiorite with Very Close to Close Fracture Spacing
WEATHERED ROCK: Grey with White, 619.0 7 36.2 50 50/0.3 Severely Weathered, Soft to Very Soft, Metadiorite with Close to Very Close Fracture Spacing | CRYSTALLINE ROCK: Grey with White, 614.1 41.1 Slightly Weathered, Hard, Metadiorite with Close Fracture Spacing WEATHERED ROCK: Grey with White, Severely Weathered, Very Soft to Soft, Metadiorite with Very Close to Close Fracture 607.9 CRYSTALLINE ROCK: Grey with White, Very Slightly to Slightly Weathered, Hard, F 606.1 49.1 Metadiorite with Moderately Close to Wide Fracture Spacing
CRYSTALLINE ROCK: Grey with White, Moderately Weathered, Medium to Moderately Hard, Metadiorite with Very Close to Close Fracture Spacing
CRYSTALLINE ROCK: Grey with White, Slightly to Moderately Weathered, Hard to Moderately Hard, Metadiorite with Very Close to Close Fracture Spacing
CRYSTALLINE ROCK: Grey with White, Slightly to Very Slightly Weathered, Hard,

N.C.D.O.T. GEOTECHNICAL UNIT CORE BORING REPORT

T.	RARMES							10-4-10 mm			SHEET 19 OF 34
WBS	ELEMEN	IT NO	33454.1.	1		ID No.		B-4	096	CC	DUNTY Davidson GEOLOGIST P. Weaver/P. Alton
SITE DESCRIPTION Bridge 140 Over Rich Fork Creek on US 29-70/I-8 BORING NO. B1-B BORING LOCATION 19+89)/I-85	Business GROUND WATER (ft
BORING NO. B1-B BORING LOCATION 19+89											OFFSET 20ft RT ALIGNMENT -L- 0 HR. NM
COLL	AR ELE	V. 65	5.2 ft	NORT	HING	771938	3.59				EASTING 1651387.88 24 HR. 2.0
TOTAL DEPTH 60.8 ft DRILL MACHINE CME 850 DRIL									DI	RILL	METHOD Wash Rotary/HQ Core HAMMER TYPE 140 lb. Autor
DATE STARTED 2/20/04 COMPLETED 2/23/04)4		SURFACE WATER DEPTH NA
CORE	SIZE H	IQ				TOTAL F	RUN :	30.1 ft			DRILLER R. Toothman
ELEV. (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	REC. (ft)%	UN RQD (ft)%	SAMP. NO.	STF REC. (ft)	RATA RQD (ft) %	LOG		DESCRIPTION AND REMARKS
625.3	29.9	1.5	2:30	(1.5)	(0.0)		(1.5)	(0.0)	\ \'7	625 623	Begin Coring @ 29.9 ft CRYSTALLINE ROCK: Grey with White, Moderately Weathered, Soft to
623.8	29.9 31.4		0:25/0.5	<u> 100%</u>	0%	/	100%	10%	5	623	CRYSTALLINE ROCK: Grey with White, Moderately Weathered, Soft to Medium Hard, Metadiorite with Very Close to Close Fracture Spacing
			1:00 1:30	(0.9)	(0.0)		(0.9) 14%	NA		L	Majority of jts @ 0° to 10° with iron staining
619.0	36.2		1:15 2:10				İ		S	F	2 vertical fractures 0.3 ft. to 0.4 ft. long with iron staining WEATHERED ROCK: Grey with White, Severely Weathered, Soft to Very
618.2	37.0	2.7	\ 1:15/0.8 V=100/0.	g (1.3)	(0.8)	 				616	Soft, Metadiorite with Close to Very Close Fracture Spacing
615.5	39.7	1.4	2:00/0.2 2:00	48%	30% NA	 	(1.3)	(0.9) 69%		9.0	5 *Note: Run #2 cut short due to core block CRYSTALLINE ROCK: Grev with White. Slightly Weathered. Hard
614.1	41.1	4.9	1:15 5:15/0.5	86%	(4.9)		(1.2)	NA	門	<u>614.</u>	Metadiorite with Close Fracture Spacing 2 bisecting fractures; 1 @ 60° and 1 @ 80°
			2:40/0.5 3:45/0.9	(4.9) 100%	100%	1	(6.2) 100%	100%	100	Ŀ	*Note: Run #3 cut short due to core block
609.2	46.0		3:30				100%		[//	_	WEATHERED ROCK: Grey with White, Severely Weathered, Very Soft to
		5.0	3:45 3:40	(4.1) 82%	(2.3) 46%		(0.9)	(0.0)	19	607.	
22.1.2			3:30 3:30/0.9				50%	(0.9)	\forall	606.	CRYSTALLINE ROCK: Grey with White, Very Slightly to Slightly Weathered.
604.2	51.0	4.9	3:00 5:40	(4.5)	(4.5)	 	83%	39%	4-1	603.	
			4:30 4:00	92%	92%		100%		اررا		1 jt @ 50°
599.3	55.9		4:00 4:10				·			_	#Note: Run #5 is short due to mismeasurement by driller CRYSTALLINE ROCK: Grey with White, Moderately Weathered, Medium to
		4.9	3:15	(4.9) 100%	(4.9) 100%				1,00	-	Moderately Hard, Metadiorite with Very Close to Close Fracture Spacing
			3:50 4:05						[//	-	1 - 0.7 ft. long vertical jt w/iron staining
594.4	60.8		4:00/0.9 4:10		· · · · · · · · · · · · · · · · · · ·	-			1-4	<u> 594.</u>	CRYSTALLINE ROCK: Grey with White, Slightly to Moderately Weathered
			3:45 3:55 4:35							- -	Hard to Moderately Hard, Metadiorite with Very Close to Close Fracture Spacing
1			5:00/0.9							_	Majority of jts @ 20° to 30° w/iron staining 1 jt @ 70° to 90° w/heavy iron staining
ĺ										-	CRYSTALLINE ROCK: Grey with White, Slightly to Very Slightly Weathered, Hard, Metadiorite with Wide Fracture Spacing
-										-	No natural fractures
	-								F	-	*Note: Runs #7 and 8 are short due to mismeasurement by driller
1	İ									-	Coring Terminated at Elevation 594.4 feet in Crystalline Rock: Metadiorite
										- -	*Note: Drill fluid = creek water + bentonite Mud density = 64.5 lbs./cu. ft. Slurry was used for soil and weathered rock drilling. Creek water alone was used for rock coring.
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